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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,559	02/05/2001	Mark John Riches	03042.0060	8942

7590 05/21/2003
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EXAMINER

LUU, THANH X

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,559

Applicant(s)

RICHES ET AL.

Examiner

Thanh X Luu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-15 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-15 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 14 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

This Office Action is in response to amendments and remarks filed April 14, 2003. Claims 1-8, 10-15 and 33 are currently pending.

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on April 14, 2003 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Objections

2. Claims 1-3, 14 and 15 are objected to because of the following informalities:

In claims 1, 14 and 15, Applicant refers to the same beams using "the at least two beams" and "the beams." Examiner recommends using consistent terminology when referring to the same elements, otherwise, antecedent basis problems would occur.

In claims 2 and 3, "[electro-optic device]" was inadvertently left in the clean copy of the claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Takenouchi et al. (U.S. Patent 4,177,487).

Regarding claims 1-4 and 33, Takenouchi et al. disclose (see Figure 4) an imaging arrangement adapted to receive two dimensional optical data (images or characters on a document above 25, not shown) represented by at least two beams of electromagnetic radiation (a beam at each of the lenses in 26), the arrangement comprising means for gating and converting (22, 23) the beams into image data, which means for gating and converting the at least two beams into image data, includes a single electro-optic device (22) comprising a photosensitive surface (27) which surface is arranged to comprise a plurality of independently-gatable portions (27a-n), wherein the independently gatable portions correspond to each of the at least two beams of electromagnetic radiation, each portion being responsive to an image signal (from 25). Takenouchi et al. further disclose (see Figure 4) the device comprises an image intensifier (30, 28, 27), wherein the image intensifier comprises a segmented photocathode (27a-n). Takenouchi et al. also disclose (see Figure 4) the segmented photocathode comprises a photocathode layer (any one of 27a-n) and a segmented conductive layer or electrode (28a-d) adjacent the photocathode layer for capacitive control.

5. Claims 1, 9, 10, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Montpas (U.S. Patent 3,654,475).

Regarding claims 1, 9 and 10, Montpas discloses (see Figures 1 and 2) an imaging arrangement adapted to receive two dimensional optical data represented by at

least two beams of electromagnetic radiation (that is, at least two beams are formed after impinging on 10), the arrangement comprising means for gating and converting (43, 44, 45) the beams into image data, which means for gating and converting the at least two beams into image data, includes a single electro-optic device comprising a photosensitive surface (45) which surface is arranged to comprise a plurality of independently-gatable portions, wherein the independently gatable portions correspond to each of the at least two beams of electromagnetic radiation, each portion being responsive to an image signal (16). Montpas also discloses (see Figures 1 and 2) means for splitting (10) an incident beam into the at least two beams as claimed.

Regarding claims 14 and 15, Montpas discloses (see Figures 1 and 2) an imaging arrangement and method for two dimensional optical data represented by an incident beam of electromagnetic radiation, comprising: means for splitting (10) the incident radiation (16) into a plurality of beams (not labeled, beams created after impinging on 10; see column 2, line 48); means for gating (43, 44) and converting (45) the beams into image data; wherein the means for gating and converting the beam into image data includes a single electro-optic device having independently-gated portions (45) corresponding to each of the plurality of beams.

6. Claims 1, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bosserman et al. (U.S. Patent 4,024,391).

Regarding claims 1, 5 and 6, Bosserman et al. disclose (see Figures 1 and 6) an imaging arrangement adapted to receive two dimensional optical data represented by at least two beams of electromagnetic radiation, the arrangement comprising means for

gating and converting (40, 40a, 12) the at least two beams into image data, which means for gating and converting the beams into image data, includes a electro-optic device (12, 106) comprising: a photosensitive surface (P1-P7) which surface is arranged to comprise a plurality of independently-gatable portions, wherein the independently gatable portions correspond to each of the at least two beams of electromagnetic radiation, each portion being responsive to an image signal.

Bosserman et al. further disclose (see Figure 5) the device comprises a solid-state imager (106), wherein the solid state imager comprises segmented imaging sections (inherent a detector array).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosserman et al. in view of the European Patent publication of Riches (EP 0701185, published March 13, 1996).

Regarding claim 7, Bosserman et al. disclose the claimed invention as set forth above. Bosserman et al. do not specifically disclose an erasing means for erasing an image. Riches teaches (see Figure 5) erasing means (Erase (reset)) for erasing an image in a solid state imager. Thus, Riches recognizes that improved imaging can be accomplished by erasing remnant charges. It would have been obvious to a person of

ordinary skill in the art at the time the invention was made to improve detection by resetting or erasing data before further imaging in the solid state imager of Bosserman et al. in view of Riches.

Regarding claim 8, Bosserman et al. disclose the claimed invention as set forth above. Bosserman et al. do not specifically disclose an overwriting means for overwriting an image. Riches teaches (see column 4, lines 5-15) overwriting means (an optical system with image sensor) for overwriting an image. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute data by overwriting an image in the solid state imager of Bosserman et al. in view of Riches to speed up imaging.

9. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Montpas in view of Dirscherl et al. (U.S. Patent 5,001,348).

Regarding claims 11 and 12, Montpas discloses the claimed invention as set forth above. The gated portions would inherently correspond with each beam since the beams are incident on the portions. Montpas does not specifically disclose chromatic means for splitting each of the plurality of beams into a plurality of differently colored beams. Dirscherl teaches (see Figures 11 and 12) splitting and chromatic means (12, 14, 15, 16) for splitting beams into a plurality of colored beams (IR, UV) in an image intensifier device (see Figure 7). Thus, Dirscherl recognize that color discrimination and splitting improves detection. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide chromatic means as claimed in the apparatus of Montpas in view of Dirscherl to improve contrast and detection.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Montpas in view of Riches.

Regarding claim 13, Montpas discloses the claimed invention as set forth above. Montpas does not specifically disclose means responsive to an event for storing converted image data converted before the event. Riches teaches (see Figure 5) means responsive to an event (triggering signal) for storing (9-14) converted image data which was converted before the event. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to save image data before erasure in the apparatus of Montpas in view Riches to improve detection by storing data for further analysis.

Response to Arguments

11. Applicant's arguments filed April 14, 2003 with respect to the reference of Ulich have been fully considered and are persuasive. The rejection of claims 1, 5 and 6 as being anticipated and the rejection of claims 7 and 8 as being obvious over Ulich have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Bosserman et al.

12. Applicant's other arguments filed April 14, 2003 have been fully considered but they are not persuasive.

Regarding the rejection of claims 1-4 and 33 as being anticipated by Takenouchi et al., Applicant asserts that Takenouchi et al. do not disclose receiving two dimensional optical data represented by at least two beams of electromagnetic radiation. Examiner disagrees. Takenouchi et al. disclose a facsimile scanner that scans documents. The

images or characters on the document being scanned are two dimensional optical data represented by at least two beams of electromagnetic radiation. As shown in Figure 4, at each lens of 26, a beam of electromagnetic radiation representing the two dimensional optical data (image or characters on the document) is being detected.

Applicant also asserts that Takenouchi et al. do not disclose splitting an image into two or more beams. This assertion is not persuasive and is moot since such language is not found in claims 1-4 and 33.

Regarding the rejection of claims 1, 10, 14 and 15 as being anticipated by Montpas, Applicant asserts that Montpas does not disclose two dimensional optical data represented by at least two beams of electromagnetic radiation. Examiner disagrees. Light from a light source (e.g. a spot) is two dimensional optical data. Further, at a point after the splitter (10), the light from the light source is represented by at least two beams of electromagnetic radiation. Applicant further asserts that Montpas does not disclose converting the beams into image data. Examiner disagrees. An image of the light source is detected. In the absence of a light source, the image data would be different. Thus, since the absence or presence of a light source is detected, there is image data.

Regarding the rejection of claims 11-13 as being obvious over Montpas in view of Dirscherl or Riches, Applicant asserts that Dirscherl or Riches do not disclose the photosensitive surface as claimed. Examiner disagrees. Montpas in view of Dirscherl or Riches do disclose all of the claim elements. As set forth above, Montpas does disclose the claimed photosensitive surface. Further, as set forth above, it would have

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been obvious to combine either Dirscherl or Riches to improve detection, and therefore, a prima facie case of obviousness is established.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Therefore, as set forth above, this rejection is proper.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta, can be reached on (703) 308-4852. The fax phone number for the organization where the application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl
May 15, 2003



Thanh X. Luu
Patent Examiner